



Silylated dioxolane polymers and monomeric compounds

Description of Technology: This invention relates to dioxolane polymers and compounds and in particular concerns certain novel dioxolane polymers and compounds prepared from 4,5-difluoro-4,5-divinyl-1,3-dioxolanes.

Patent Listing:

1. **US Patent No. 5,684,111**, Issued November 4, 1997, "Sylylated dioxolane polymers and monomeric compounds"

<http://patft.uspto.gov/netacgi/nph-Parser?Sect2=PTO1&Sect2=HITOFF&p=1&u=%2Fnethtml%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&d=PALL&RefSrch=yes&Query=PN%2F5684111>

Market Potential: U.S. Pat. Nos. 5,233,058 and 5,286,825, Anton et al. discloses 2,2-bis(trifluoromethyl)-4,5-difluoro-4,5-divinyl-1,3-dioxolane compounds having the formula ##STR1## and copolymers of this compound with tetrafluoroethylene.

U.S. Pat. No. 5,233,071, Wilczek, discloses a process for the hydrosilylation of alpha fluorinated olefins having the formula $H_{sub.2}C.dbd.CHCFR_{sup.a}R_{sup.b}$ where $R_{sup.a}$ is fluorine or perfluorohydrocarbyl and $R_{sup.b}$ is fluorine, hydrogen, hydrocarbyl or substituted hydrocarbyl in the presence of a catalytically effective amount of a cobalt catalyst of the formula $Co_{sub.2}(CO)_{sub.8-z}L_{sub.z}$.

Applicants have found that certain novel silylated dioxolane compounds prepared from compounds such as those disclosed in U.S. Pat. No. 5,286,825 are particularly useful as additives to polymers, and as primers, surface modifying agents and lubricants

Benefits:

- Provides a polymer comprising repeat units of formula $I_{##STR2##}$ wherein x is an integer from 2 to 100

Applications:

- Dioxolane polymers and compounds

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